



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,937	08/20/2001	Chiaki Todaka	PF-2568	5889
466	7590	08/25/2004	EXAMINER	
YOUNG & THOMPSON			LE, BRIAN Q	
745 SOUTH 23RD STREET 2ND FLOOR			ART UNIT	
ARLINGTON, VA 22202			PAPER NUMBER	

2623  
DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/913,937

Applicant(s)

TODAKA, CHIAKI

Examiner

Brian Q Le

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

*Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Regarding claim 1, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Claims not specially addressed depend from indefinite antecedent claims.
3. Regarding claim 1, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).
4. Claim 1 recites the limitation "the detected pixel" on line 8 of claim 1. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 1 recites the limitation "the same line" on line 8 of claim 1. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 1 recites the limitation "the one image area" on line 12 of claim 1. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 1 recites the limitation "the same image area" on line 13 of claim 1. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 1 recites the limitation "the above pixels" on lines 13-14 of claim 1. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 1 recites the limitation "the different area numbers" on line 18 of claim 1. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2623

10. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 1-8 are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

### *Claim Objections*

12. Claims 1-8 are objected to because these claims are very difficult to understand due to the use of confusing language. Appropriate correction is required. The prior art rejection based on the Examiner's best understanding.

### *Claim Rejections - 35 USC § 102*

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Agrawala U.S. Patent 4,183,013.

Regarding claim 1, Agrawala teaches a method for extracting feature quantities of a binary image for extracting feature quantities such as an area, a circumferential length, end points, a center of gravity, and a moment of an image area by scanning, by a raster scanning method or the like, image data that is a binary image to be displayed in one frame (FIG. 1), characterized by comprising the steps of:

Art Unit: 2623

Checking a content of each of a pixel immediately preceding the detected pixel on the same line and a pixel that is on an immediately preceding line and right above the detected pixel when a pixel having a prescribed density is detected in scanning one line of image data (FIG. 5A-5B, 6A-6B, and 16A);

Inheriting an area number of the one image area when the detected pixel belongs to the same image area as one of the above pixels (column 21, lines 28-42);

Performing the above processing sequentially on succeeding pixels to store resulting image data in a line buffer (all FIG. 9s);

Scanning the line buffer in a reverse direction and modifying the different area numbers to the same area number when consecutive pixels belong to respective image areas but have different area numbers after the scanning of the one line has completed (FIG. 13, element 74); and

Repeating the same line scanning to a last line of one frame to store feature quantities for each image area (counter) (FIG. 12, element 20a).

Regarding claim 2, Agrawala continues the teaching of a method for extracting feature quantities of a binary image comprising the steps of:

Checking a content of each of a pixel immediately preceding the detected pixel on the same line and a pixel that is on an immediately preceding line and right above the detected pixel when a pixel having a prescribed density is detected in scanning one line of the image data (FIG. 5A-5B, 6A-6B, and 16A); and

Art Unit: 2623

Inheriting an area number of the image area of the pixel right above the detected pixel with priority given to it when the right detected pixel belongs to image areas of both of the above pixels (column 21, lines 28-42).

For claim 3, Agrawala discloses the method for extracting feature quantities of a binary image further comprising a step of performing scanning one line of the image data to provide N pixels that follows an image area having a prescribed area number that has just terminated as semi-image areas of an adjacent image area (column 6, lines 13-33).

Referring to claim 4, Agrawala further teaches a method for extracting feature quantities of a binary image further comprising a step of performing scanning one line of the image data to provide N pixels that follows an image area having the same area number that has just terminated as semi-image areas of an image area that is adjacent from right above when the image area having a prescribed area number terminated at the pixel that is located right above on immediately preceding line (FIG. 5A and column 16, lines 13-33).

Regarding claim 5, Agrawala further discloses a method for extracting feature quantities of a binary image further comprising a step of scanning the line buffer in a reverse direction and modifying the different area numbers to the common area number when consecutive pixels belong to respective image areas and semi-image areas but have different area numbers after the scanning of the one line has completed (All FIG. 9s).

For claim 6, Agrawala also teaches a method for extracting feature quantities of a binary image further comprising a step of performing scanning one line of the image data to provide N pixels than or equal to 1) that follows an image area having a prescribed area number that has just terminated as semi-image areas of an adjacent image area (FIG. 11A).

Art Unit: 2623

Also to claim 7, Agrawala teaches a method for extracting feature quantities of a binary image further comprising a step of performing scanning one line of the image data to provide N pixels that follows an image area having the same area number that has just terminated as semi-image areas of an image area that is adjacent from right above when the image area having a prescribed area number terminated at the pixel that is located right above on immediately preceding line (FIG. 21).

Regarding claim 8, Agrawala teaches a method for extracting feature quantities of a binary image further comprising a step of scanning the line buffer in a reverse direction and modifying the different area numbers to the common area number when consecutive pixels belong to respective image areas and semi-image areas but have different area numbers after the scanning of the one line has completed (FIG. 20A).

### *CONCLUSION*

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to image features extraction:

U.S. Pat. No. 6,483,942 to Curry, teaches micro region count image texture characterization.

U.S. Pat. No. 5,748,777 to Katayama, teaches method for extracting outline data and encoding image data using the outline data.

Art Unit: 2623

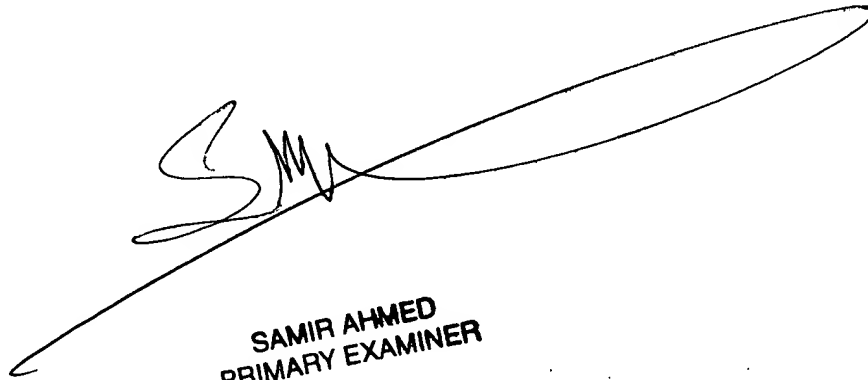
16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 703-305-5083. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC Customer Service whose telephone number is 703-306-0377.

BL

August 18, 2004



**SAMIR AHMED  
PRIMARY EXAMINER**